



# National Defense Graduate Fellowship Program

**Final Report** 

Grant # N00014-93-1-0774

April 1, 1993 - August 1, 1999

Submitted and Prepared by:

Jeffrey P. Jarosz Senior Program Manager Projects Manager

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The National Defense Science and Engineering Graduate Fellowship Program (NDSEG) offers three-year fellowships as a means of increasing the number of U.S. citizens trained in science and engineering disciplines of military importance. Sponsored by the Army, Navy, Air Force and Defense Advanced Research Projects Agency (DARPA), these fellowships are offered to individuals who have demonstrated ability and special aptitude for advanced training in science and engineering. NDSEG Fellowships are awarded for study and research leading to doctoral degrees in mathematics, physical, biological, ocean and engineering sciences. This grant supported students sponsored by the Office of Naval Research (ONR) for 29 appointments beginning in academic year 1993/1994 and 33 appointments beginning in academic year 1994/1995. This reports contains information on these students as well as NDSEG students supported beginning in academic year 1989 through the final class of students who started in academic year 1994/1995.

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# ONR-NDSEG Graduate Fellowship Program

Grant N00014-93-1-0774 1 April 1993 - 30 September 1999

Final Report

Prepared and submitted by: Jeffrey P. Jarosz Senior Program Manager Projects Department

#### 1. Introduction

Grant N00014-93-1-0774, as subsequently amended, provided \$6,858,199 for the support of the program from April 1, 1993 through September 30, 1999 for the fellows appointed in 1993 and 1994.

This report serves as ASEE's final report..

#### 2. Administration

ASEE made contact with each of the fellows upon notification from ONR of their selection. ASEE was responsible for the payment of the fellow's stipends and tuition along with a departmental allowance provided to each fellow's graduate institution to cover various expenses related to the fellows' graduate education.

ASEE also had regular reporting requirements. At the end of each academic year, ASEE required all fellows to complete a summer plan form and a faculty adviser was asked to certify the student's progress. These academic reports were then compiled into a single report for ONR. ASEE was also required to submit regular administrative and financial reports describing ASEE's grant management activities and providing a complete financial accounting for the period.

### 3. Financial management and reporting

Two grants plus amendments were awarded to conduct the program from August 1, 1989 through September 30, 1999. A total of \$27,162,017 was authorized to conduct the program for six groups of fellows (three years for each group) through September 30, 1999. ASEE periodically submitted vouchers for advance payment of student support and administrative expenses.

### 4. Stipend and Tuition Payments

From September 1989 through August 1990 ASEE paid fellowship stipends with personal checks

issued manually by ASEE's accounting department. Since September 1990, stipends have been deposited electronically into fellows' bank accounts on the first working day of each month. Fellows can elect to have stipends deposited into checking or savings accounts.

Tuition payments were made on behalf of the fellows to their respective graduate institutions. ASEE contacted the office of the bursar at each fellow's institution to receive the bills for the tuition and required fees. Upon receipt of the bill, ASEE would issue the appropriate payments.

Departmental allowances were paid to the fellows' graduate institutions at the conclusion of the academic year. After receiving the fellow's academic report and the advisor's certification of academic progress, the payments were issued.

## 5. Summer at Navy R&D centers

ONR invited NDSEG fellows to conduct research at Navy labs during the summer. Every December, ASEE mailed each fellow a list of Navy R&D centers with their current research interests and contact persons. Every January ASEE mailed each R&D center a database listing all the fellows with their addresses, telephone numbers, universities, advisers' names, and detailed descriptions of their research interests. Thus, labs were encouraged to contact the fellows, and fellows were encouraged to contact the labs.

Approximately 25% of the ONR-NDSEG fellows took advantage of the opportunity to conduct research at Navy labs during the summer. In addition to the professional benefits, they received a higher monthly stipend, travel reimbursement for one round trip, and a subsistence allowance.

Feedback from the fellows and their laboratory colleagues was positive.

#### 6. Statistics on ONR-NDSEG fellows

ONR awarded a total of 272 NDSEG fellowships through ASEE. Only 33 fellows (12%) withdrew and there were also three "no-shows," persons who accepted the fellowship but never attended graduate school and therefore did not participate in the program.

For the Grant N00014-93-1-0774, 29 fellows were appointed in 1993, of whom 23 completed their three-year tenure, 6 withdrew early, and at least 16 received their Ph.D. In 1994 33 fellows were appointed, of whom 29 completed their three-year tenure, 3 withdrew early, 1 accepted the fellowship but never participated in the program and at least 15 received their Ph.D.

Two hundred thirty-six students (86%) completed the three-year program successfully. When their tenure ended, ASEE mailed them a farewell letter and a form. The letter encouraged them to keep ASEE informed of their whereabouts. The form requested their mailing address, telephone number and immediate plans; it also asked whether they plan to continue their pursuit of the PhD full time, study part time and work part time, or abandon their pursuit of the PhD. The forms which have returned to ASEE indicate that most ex-fellows are continuing their pursuit of the PhD full time and anticipate receiving it in approximately one more year.

For long-term tracking, ASEE also sent letters and forms to fellows who completed the program two years earlier. ASEE continued this tracking through August 1999, updating information on fellows' whereabouts and activities every two years.

#### Attachments:

Attachment A is a listing of all of the fellows appointed by ONR from 1989 to 1994 with their graduate institution and post-fellowship employment. Attachment B is a chart showing which proportion of fellows had received the doctoral degrees to the best of ASEE's knowledge. Attachment C is a chart showing the 1993 and 1994 selections by discipline. Attachment D is a chart of participant disciplines for the years 1989 - 1994 for all participants and for those who received their Ph.D. Attachment E is a compilation of comments ASEE received from fellows at the conclusion of their fellowship.

1989	ONR	Apr	ointees
------	-----	-----	---------

Name	School	PhD?	Current
Alston, Michael	University of California, San Diego	Yes	
Attanasio, Steven	Massachusetts Institute of Technology	Yes	Employed by Lockheed-Martin Corporation
Barr, John	University of Missouri, Rolla	Yes	
Betancourt, Marcos	University of California, San Diego	Yes	Postdoctoral Fellow at University of Maryland
Brook, Edward	Massachusetts Institute of Technology	Yes	Postdoctoral Fellow at University of Rhode Island
Chinn, Jason	California Institute of Technology	Yes	Withdrew early
Cisneros, Joseph	University of California, Los Angeles	Yes	
Cornejo-Weaver, Gabriela	University of Colorado	Yes	Faculty Member at University of California, Denver
Court, Mary	Rensselaer Polytechnic University	Yes	
Danilowicz, Bret	Duke University	Yes	Postdoctoral Fellow at University of Windsor
Del Castillo, Jesus	University of California, Davis	Yes	
Dhar, Lisa	Massachusetts Institute of Technology	no	
Ernst, Michael	Massachusetts Institute of Technology	no	Employed by Microsoft
Gadd, Steven	University of California, Berkeley	Yes	
Goodwin, Robert	University of Michigan	Yes	
Graettinger, Thomas	North Carolina State University	no	
Groh, Jennifer	University of Pennsylvania	Yés	
Hahn, Thomas	Carnegie Mellon University	no	
Kalish, Michael	University of California, San Diego	no	
Kim, John	Massachusetts Institute of Technology	Yes	
Lang, Adam Kennedy	Carnegie Mellon University	Yes	
Lee, Jennifer	Massachusetts Institute of Technology	Yes	
Lynch-Stieglitz, Jean	Columbia University	Yes	Faculty Member at Columbia University
McDonald, Brian	Stanford University	Yes	
Nissenbaum, Amelia	New York University	no	
Potts, Virginia			Accepted, no further correspondence
Schwartz, Elliott	Massachusetts Institute of Technology	Yes	Postdoctoral Fellow at Los Alamos National Laboratory
Sklar, Erik	Brown University	Yes	
Stevenson, J. Mark	University of California, San Diego	Yes	Employed by Space & Naval Warfare Center, San Diego
Swift, Dana	University of Washington	Yes	
Taylor, Valerie	University of California, Berkeley	Yes	Faculty Member at Northwestern University
Tighe, Thomas	Harvard University	Yes	
Torng, Eric	Stanford University	Yes	Faculty Member at Michigan State University
Trenk, Ann	Johns Hopkins University	Yes	Postdoctoral Fellow at Dartmouth College
Tung, Eugene	University of California, Berkeley	Yes	
Willard, Monique	University of California, Los Angeles	no	
Wong, Jose	Stanford University	no	Withdrew early
Wyse, Lonce	Boston University	Yes	Employed by Institute of Systems Science
Zeger, Linda	Harvard University	Yes	Postdoctoral Fellow at Educational Testing Services

	1990 ONR		
Name	School  University of Wissensin	PhD?	Current
Allen, Donald	University of Wisconsin University of Michigan	no no	Withdrew early
Ansari, Amid		Yes	Faculty Member at Baruch College, CUNY
Bane, Kimberly	North Carolina State University University of California, Berkeley	no	raculty withholf at bandon conege, convi
Barnum, Douglas		Yes	
Bawolek, Edward	Arizona State University	Yes	
Bhattacharya	Stanford University	Yes	
Bigot, Peter	University of Arizona		
Bisantz, Ann	Georgia Institute of Technology	Yes	
Cynthia Bowline	Oregon State University	Yes	
Brown, Holly	University of Washington	no	Wid down and
Brown, Perry	University of Arkansas	no	Withdrew early
Caldwell, Ellen	University of Alabama, Birmingham	Yes	Post of INTI OP 12 Interceptor
Casey, Michael	University of California, San Diego	Yes	Postdoctoral Fellow at Brandeis University
Chapsky, Lars	University of California, Berkeley	Yes	
Chui, Herman	Stanford University	Yes	Employed by Hewlett-Packard
Cofer, Darren	University of Texas	Yes	Employed by Honeywell Technology Center
Craig, Anthony	University of Washington	no	Withdrew early
Dahiyat, Bassil	California Institute of Technology	Yes	
Dennin, MIchael	University of California, Santa Barbara	Yes	Postdoctoral Fellow at University of California, Los Angeles
Durkin, James	Cornell University	no	
Egolf, David	Duke University	Yes	
Ephron, David	Stanford University	Yes	
Gingrich, Harold Scott	University of New Mexico	Yes	
Grah, Michael	Purdue University	Yes	Employed by Michelin Tire Corporation
Haase, Mark Christopher	University of Chicago	Yes	Employed by Glynn Scientific, Inc.
Hiemstra, David	University of Illinois	no	Withdrew early
Hoover-Dahlseid, Tina	Northwestern University	no	
Kelly, Rhonda	University of Washington	no	
Koehler, Derek	Stanford University	Yes	Faculty Member at University of Waterloo
Kohfeld, Karen	Lamont-Doherty Earth Observatory	Yes	
Laursen, Annette			Accepted, no further correspondence
Lipphardt, Bruce	Old Dominion University	Yes	Faculty Member at Old Dominion University
Mattingly, William	Cornell University	Yes	Employed by Corning, Inc.
McCleary, James	Texas A&M University	no	
Orsi, Thomas	Texas A&M University	Yes	Employed by Planning Systems, Inc.
Pierson, Viccki	University of Maryland, Baltimore County	no	
Pizarro, Pedro	California Institute of Technology	Yes	Employed by McKinsey & Company
Raubenheimer, Britt	University of California, San Diego	Yes	Postdoctoral Fellow at University of California, San Diego
Rincon, Diana	University of Michigan	Yes	Faculty Member at Universidad de los Andes
Robinson, Jennifer	Georgia Institute of Technology	Yes	Employed by Lucent Technologies
Royston, Thomas	Ohio State University	Yes	
Russakow, Jeffrey	Stanford University	Yes	Employed by McKinsey & Company
_ Ryan, John	University of Rhode Island	Yes	
Santos, Eunice	University of California, Berkeley	no	
Shipley, Brooke	Massachusetts Institute of Technology	Yes	Postdoctoral Fellow at University of Notre Dame
Super-Fried, Naomi	Massachusetts Institute of Technology	Yes	Employed by Newton Scientific, Inc.
Taylor, Brian	Massachusetts Institute of Technology	no	
Thomas, Jeffrey	University of Texas	Yes	
_ Turk, George	Oregon State University	no	Withdrew early
Voyles, Richard	Carnegie Mellon University	Yes	Faculty Member at University of Minnesota
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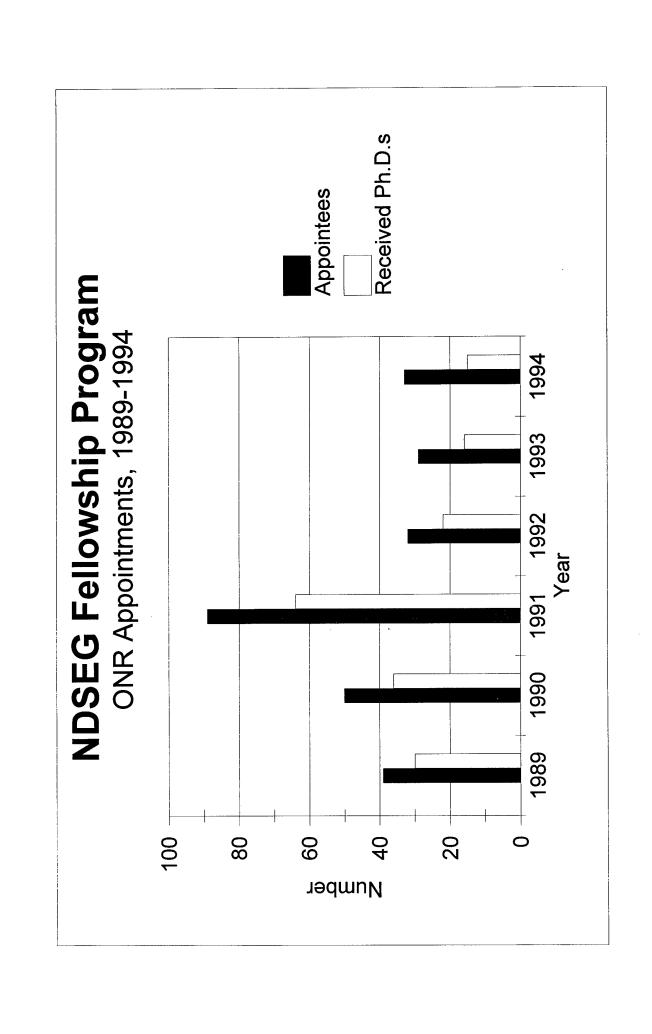
)	1991 ONK 2		
Name Jannifer	School University of California, Berkeley	PhD? no	Current
Allen Kimberly	University of California, San Diego	no	
Allen, Kimberly	University of California, Los Angeles	no	
Appert, Charles	California Institute of Technology	Yes	Employed by Hughes Research Labs
Annau, Thomas	University of Michigan	Yes	Disprojed of Hugines Resourch Dues
Barnard, Thomas	University of South Florida	no	
Beauchamp, Nathaniel	•	Yes	Employed by Princeton Financial Engineering
Berger, Adam	Princeton University Harvard University	Yes	Employed by Timecton Timatetal Engineering
Black, Charles	•	Yes	
Boutin, Debra	Cornell University	Yes	
Bouwhuis, Mary	Michigan Technological University	Yes	
Boyan, Justin	Carnegie Mellon University		Postdoctoral Fellow at Carnegie Geophysical Laboratory
Brandes, Jay	University of Michigan	Yes	Postuoctoral renow at Carnegic Geophysical Laboratory
Callis, Stanley	University of California, Berkeley	no	
Culver, Mary	University of Washington	Yes	
Dantsker, Eugene	University of California, Berkeley	Yes	ward t
Dilley, Suzanne	Georgia Institute of Technology	no	Withdrew early
Dunkle-Shapiro, Stephanie	Columbia University	Yes	Employed by U.S. Geological Survey
Eason, Margaret	Duke University	Yes	Faculty Member at University of Cincinnati
Edmonds, Henrietta	Massachusetts Institute of Technology	Yes	Postdoctoral Fellow in United Kingdom sponsored by NATO
Edwards, Jonathan	Harvard University	Yes	
Ellis, Nicole	Stanford University	no	
Epstein, Russell	Harvard University	Yes	
Fenteany, Gabriel	Harvard University	Yes	
Fick, Michael	Stanford University	no	Withdrew early
Filipelli, Gabriel	University of California, Santa Cruz	Yes	Faculty Member at Indiana University
Foster, Diane	Oregon State University	no	
Glasheen, James	Harvard University	Yes	Postdoctoral Fellow at University of California, Berkeley
Grinde, Roger	Pennsylvania State University	Yes	Faculty Member at University of New Hampshire
Herr, Hugh	Harvard University	Yes	
Herrera, Joan	University of Florida	no	
Holmes, Archie	University of California, Santa Barbara	Yes	
Holt, Gary	California Institute of Technology	Yes	
Howell-Kubler, Alexis	University of Washington	no	Withdrew early
Hsu, Lawrence	Massachusetts Institute of Technology	no	Withdrew early
Huang, Emily	University of California, San Diego	Yes	Postdoctoral Fellow at Howard Hughes Medical Institute
Hubbard, Bryan	Texas A&M University	Yes	Employed by Marley Cooling Tower
Hughes-Lanning, Christine	Duke University	Yes	
Hulbert-Shearon, Tempie	University of Michigan	Yes	Employed by Kidney Epidemiology and Cost Center
Isaacs, Lyle	University of California, Los Angeles	no	Withdrew early
Jacob, Joseph	Cornell University	Yes	Employed by Jet Propulsion Laboratory
Kaihatu, James	University of Delaware	Yes	Employed by Naval Research Laboratory
Katine, Jordan	Harvard University	Yes	
Kewitsch, Anthony	California Institute of Technology	Yes	Employed by Arroyo Optics
Kocian, Lorna	Stanford University	no	
Kohin, Suzanne	University of California, Santa Cruz	Yes	
LeBel, Deborah	University of Washington	Yes	
Lee, Katherine	Massachusetts Institute of Technology	Yes	Postdoctoral Fellow at University of Texas
Lesh, Neal	University of Washington	Yes	
Lewis, Daniel	Stanford University	no	Withdrew early, employed by Motorola
Lipkin, Don	University of California, Santa Barbara	no	
Liu, Robert	Stanford University	Yes	
Logan, Cameron	Harvard University	no	
Marchelya, John	Johns Hopkins University	Yes	
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M. d. Code	Commis Institute of Technology	no	
Marsh, Craig	Georgia Institute of Technology	no	Withdrew early
Matsushima, Harriet	Boston University	no Yes	windiew early
McLean, Jennifer	University of Washington		Faculty Member at University of Wisconsin, Whitewater
Menningen, Kenneth	University of Wisconsin	Yes	Faculty Member at Offiversity of Wisconsin, Wintewater
Mikic, Borjana	Stanford University	no	
Mitzenmacher, Michael	University of California, Berkeley	Yes	
Munakata, Yuko	Carnegie Mellon University	Yes	Faculty Member at University of Denver
Namboodri, Chettoor	Virginia Polytechnic Institute	no	Withdrew early
Nelson, Lynn	Massachusetts Institute of Technology	Yes	
Newyear, Karl	University of Washington	Yes	
Nyerges-Chance, Beth	Cornell University	Yes	Faculty Member at University of the Pacific
Nystrom, Michael	Northwestern University	Yes	
Ogston, Andrea	University of Washington	Yes	
Packman, Aaron	California Institute of Technology	Yes	
Poon, Alex	Stanford University	Yes	
Ratz, Andrew	Harvard University	Yes	
Rawsky, Glenn	Northwestern University	Yes	
Redsten-Jansen, Ann	Massachusetts Institute of Technology	Yes	Employed by Arthur D. Little, Inc.
Rehmann, Chris	Stanford University	Yes	Postdoctoral Fellow at Woods Hole Oceanographic Institute
Richter, Anke	Stanford University	Yes	Employed by Research Triangle Institute
Robison, Keith	Harvard University	Yes	Employed by Millennium Pharmaceuticals
Ross, Mark	University of California, Los Angeles	Yes	
Rutledge, Anne	Texas A&M University	Yes	
Sajda, Paul	University of Pennsylvania	Yes	Employed by David Sarnoff Research Center
Sanders, Paul	Northwestern University	Yes	Postdoctoral Fellow at Argonne National Laboratory
Seiler, Frederick	Carnegie Mellon University	no	Withdrew early
Sonnerup, Rolf	University of Washington	Yes	
Spiers, Bradford	Massachusetts Institute of Technology	no	Withdrew early
Stewart, Matthew	University of Southern Mississippi	Yes	·
Taylor, Todd	Massachusetts Institute of Technology	Yes	Postdoctoral Fellow at Massachusetts Institute of Technology
Tedesco, Matthew	Massachusetts Institute of Technology	no	
Vaia, Richard	Cornell University	Yes	·
Villeneuve, Randall	Massachusetts Institute of Technology	no	Withdrew early
Wilson, David Bruce	Massachusetts Institute of Technology	Yes	Postdoctoral Fellow at National Science Foundation
Zuniga, Marco	University of California, Berkeley	Yes	
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Name	School	PhD?	Current
Barbeau, Katherine	Massachusetts Institute of Technology	Yes	
Beaulieu, Stacey	University of California, San Diego	Yes	
Bower, Michael	University of California, San Francisco	Yes	Employed by Smith Kline Beecham Pharmaceutical Company
Burnside, Shelly	Cornell University	Yes	
Chick, Steven	University of California, Berkeley	Yes	Faculty Member at University of Michigan
Cimaszewski, Steven	Massachusetts Institute of Technology	no	Withdrew early
Conrad, Keith	Harvard University	Yes	Faculty Member at Ohio State University
Cook, Grant	Stanford University	no	Withdrew early
Cutrer, David	University of California, Berkeley	Yes	
Falvo, James	Harvard University	no	
Fleischer, Lisa	Cornell University	Yes	
Fung, Francis	Princeton University	Yes	Employed by Odyssey Research Associates
Gleixner, Robert	Stanford University	Yes	
Hancock, Mark	University of Delaware	no	Withdrew early
Harris, Carolyn	Massachusetts Institute of Technology	no	
Harville, Michael	Stanford University	no	
Honea, Michael	North Carolina State University	no	Withdrew early
Kietzman, John	Stanford University	Yes	Employed by Lexmark International
Lee, Carol	University of Washington	Yes	Postdoctoral Fellow at National Science Foundation
Lemoine, James	Massachusetts Institute of Technology	no	Employed by Quantum Corporation
Levitin, Daniel	University of Oregon	Yes	Postdoctoral Fellow at Interval Research Corporation
McLaughlin, Shirpaul	Georgia Institute of Technology	Yes	Employed by Motorola
Pedulla, Marisa	University of Pittsburgh	Yes	
Reardon, Brian	University of Illinois	Yes	
Sadd, Michael	Cornell University	Yes	
Smedira, Scott	Cornell University	Yes	
Swanson, Eric	Stanford University	no	Withdrew early
Weicker, Nathalie	Massachusetts Institute of Technology	no	Withdrew early
Wilson, David Selkirk	Stanford University	Yes	
Wozniak, John	Pennsylvania State University	Yes	
Yarowsky, Daivd	University of Pennsylvania	Yes	
Young, Reginald	Harvard University	Yes	
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Name	School	PhD?	Current
Alonzo, Alicia	California Institute of Technology	Yes	
Cohen, Amanda	University of Washington	no	
Daly, Peter	Massachusetts Institute of Technology	Yes	
Forbes, Jeffrey	University of California, Berkeley	no	
Gratt, Jason	Massachusetts Institute of Technology	Yes	
Hamme, Roberta	University of Washington	no	Employed by Scott Semiconductor Gases
Hoehler, Tori	University of North Carolina	Yes	
Kadlec, Lisa	Duke University	Yes	
Ketchpel, Steven	Stanford University	Yes	
Krause, Jean	Massachusetts Institute of Technology	Yes	
Krueger, Brent	University of Chicago	Yes	
Larkin, Narasimhan	University of Washington	Yes	
Moles, Kenneth	University of California, San Diego	no	Tenure Extended
Moroney, Jean	Carnegie Mellon University	no	Withdrew early
Nevins, Thomas	University of Chicago	Yes	
Nguyen, Ky Ngoc	Stanford University	no	Withdrew early
Norman, Kenneth	Harvard University	Yes	
Okhuysen, Victor	Pennsylvania State University	no	Withdrew early
Palko, Carl	University of Illinois	Yes	
Peters, Robert	Harvard University	Yes	
Pollack, David	Harvard University	no	
Poon, Anna	Massachusetts Institute of Technology	no	Withdrew early
Ripley, Bonnie	Massachusetts Institute of Technology	Yes	
Shutts, Chris	Massachusetts Institute of Technology	no	Withdrew early
Turner, James	University of Washington	no	Withdrew early
Vargas, Matthew	Stanford University	no	
Wayne, Kevin	Cornell University	Yes	
Winton, Michael	University of California, Berkeley	no	Tenure Extended
Wolfgang, Meldon	Massachusetts Institute of Technology	Yes	

Name	School	PhD?	Current
Anderson, Eric	University of California, Berkeley	no	
Arbic, Brian	Massachusetts Institute of Technology	Yes	
Banner, John	University of Miami	no	
Boudreau, Charles	Harvard University	no	Withdrew early
Britten, Stephen	Massachusetts Institute of Technology	no	Tenure Extended
Bromberg, Hilary	Harvard University	no	
Burgett, Russell	University of Rhode Island	no	
Campbell, Josh	University of California, Berkeley	Yes	
Chu, Edison	Massachusetts Institute of Technology	no	Withdrew early
Cimbala, David	Cornell University	no	Tenure Extended
Cook, Benjamin	Massachusetts Institute of Technology	no	
Empedocles, Stephen	Massachusetts Institute of Technology	Yes	
Epifanio, Craig	University of Washington	Yes	
Finberg, David	Massachusetts Institute of Technology	no	
Fischer, Albert	Massachusetts Institute of Technology	Yes	
Floyd, Larry	Colorado State University	no	
Grundy, William	University of California, San Diego	no	Tenure Extended
Hallgren, Sean	University of California, Berkeley	Yes	
Herring, Jeanette	Vanderbilt University	no	
Hill, David	University of California, Berkeley	Yes	
Houser, Dorian	University of California, Santa Cruz	no	Tenure Extended
Jacobs, Robert	Stanford University	Yes	
Jayne, Steven	Massachusetts Institute of Technology	Yes	
Keeton, Charles	Harvard University	Yes	
Marsh, Elizabeth	Stanford University	Yes	
Myers, David	State University of New York at Stony	Yes	
Nerney, Jacqueline	Stanford University	Yes	
Pierre, Darren	Massachusetts Institute of Technology	no	
Reed, Eric	Massachusetts Institute of Technology	Yes	
Scott, Ralph	Harvard University	no	
Shea, John			Accepted, no further correspondence
Spicer, John	University of Michigan	no	Withdrew early
Tate, Matthew	Massachusetts Institute of Technology	Yes	



# Electrical Engineering (3) Electrical Engineering (2) Industrial Engineering (2) Industrial Engineering (4) Computer Science (2) -Computer Science (2) - Materials Science (3) **NDSEG Fellowship Program** -Chemistry (3) -Biology (2 ) Chemistry (2 ) -Materials Science (2) Appointments by Discipline Biology (2) 1994 Appointments 1993 Appointments Mathematics (3)-Mathematics (2)-Physics (2) Physics (2)-Mechanical Engineering (2) Mechanical Engineering (2) Naval Archictecture (1) Naval Archictecture (2)<sup>-</sup> Oceanography (6) Oceanography (6) Neuroscience (2)-Neuroscience (2)-

# -Electrical Engineering (26) -Electrical Engineering (18) Computer Science (12) -Industrial Engineering (15) **NDSEG Fellowship Program** -Computer Science (21) --Industrial Engineering (24) -Geosciences (4) -Geosciences (4) Materials Science (21) -Biology (15) —Chemistry (20) Materials Science (16) Participant Disciplines Ph.D. Recipients All Appointees Unknown (2) Physics (20) Mathematics (19)-Mathematics (11)-Physics (17 )— Operations Research (0 )— Mechanical Engineering (8)-Mechanical Engineering (19)-Naval Architecture (7) Naval Architecture (14)-Oceanography (46) Neuroscience (16)-Oceanography (33) Neuroscience (20)-

Attachment E: Comments from former fellows.

Thomas Annau wrote: "The NDSEG fellowship was an invaluable part of supporting my academic career.:

Steven Attanasio wrote: "I would like to formally thank ONR and ASEE for providing me with financial support during my first three years of graduate school. It has been a great honor to be recognized as a DoD fellow. In addition, the ONR financial support helped me to be flexible in my choice of an adviser and a thesis project. I will be sure to acknowledge the aid of ONR in any publications derived from work on my PhD thesis or from work performed during the summer which I spent at NSWC Carderock. I am now doing research for Naval Nuclear Propulsion Systems at the Knolls Atomic Power Lab in Schenectady, so the DoD is getting a direct benefit for having funded my work. I would also like to thank you for being a helpful contact during my years as a DoD fellow, despite the extra paperwork which I know I sometimes caused you. If I can be of any help to you or to future graduate students, please let me know."

Adam Berger wrote: "I am extremely appreciative of the support from ONR during my years as a graduate student. One project I worked on as a graduate student was for the Military Airlift Command. After graduation I was not able to find an academic position. Consequently, I have started my own company specializing in risk management solutions for individuals and organizations. If you have any questions or if I can be of any assistance, please don't hesitate to call."

Michael Bower wrote: "The fellowship helped us survive in one of the most expensive areas in the country."

Edward Brook wrote: "I believe that programs like the DoD graduate fellowship are vital. As funding for science (and therefore the number of new PhDs) shrinks, it is extremely important that high quality researchers continue to be supported by programs of this type."

Stephen Chick wrote: "The ONR-NDSEG program permitted me to jump-start my research work during grad school. A great program!"

Peter Daly wrote: "I would like to take this opportunity to thank you for administering my ONR-NDSEG fellowship. For the past four years, you have done an excellent job processing my stipend and tuition money. The efficiency and reliability of the ASEE-administered program was remarkable. I could always count on my stipend being automatically forwarded to my checking account on time. My tuition payments were promptly made, and my student health insurance covered. The fellowship which you administered has funded me, either through stipend or tuition, nearly \$200,000 over the past four years. My graduate education would not have been possible without it. Again, thank you very much for your superior work."

David Ephron wrote: "I strongly believe that attaching fellowship funds directly to students who can then choose where and for whom to work is an essential means of providing additional feedback on research programs beyond the normal research grant process."

Francis Fung wrote: "I think you will be pleased to know that my company does a lot of work for the DoD and other government agencies, such as NASA, DARPA, and Rome Labs."

Archie Holmes wrote: "The ONR-NDSEG fellowship was extremely helpful to me early in my grad school career. It gave me the opportunity to spend a quarter talking to different faculty members about their research programs and choose one in which I had a very strong interest. This was mainly possible because minimal resources needed to be provided by the professor initially. The ability to have some control over one's research project via fellowship funds has led, in my case, to an opportunity that may have been hard in other circumstances. I feel that the investment made in me by the ONR-NDSEG fellowship has helped me in defining an important problem on which to work. I allowed me more flexibility to obtain different experiences that I feel will serve me well in my career as an educator of future engineers."

James Kaihatu wrote: "Without the fellowship I doubt that I would have been able to attain my PhD. It was invaluable."

Jordan Katine wrote: "I just want ONR and ASEE to know that I really am grateful for the support from my fellowship. The unfortunate truth is that many advisers at Harvard are reluctant to accept grad students without fellowships into their research groups. Furthermore, the teaching responsibilities that students without fellowships are forced to assume can easily add a year to their time in grad school. Your fellowship allowed me to survive the first year of grad studies without much of the pressure many of my colleagues had to face."

Karen Kohfeld wrote: "I feel very fortunate to have received this funding. In a time when funding is quite scarce, this money provided me with the possibility of continuing my studies. In addition, the award was quite an honor."

Carol Lee wrote: "The ONR predoc was very helpful, especially the extra \$2,000 annual institutional money. I used it for research when my advisor had no funds."

Katherine Lee wrote: "My predoctoral fellowship from the Office of Naval Research was extremely beneficial to my development as a chemist. First of all, it enabled me to join the Danheiser research group (my first choice), where I received excellent training in organic synthesis over the past five years. Second, I was not required to teach during my first year and therefore could concentrate on getting started in the lab. I opted to teach in my fourth year and found that as an advanced graduate student I had more to offer as a teacher than I would have as a first year graduate student. The fellowship also enabled me to volunteer in MIT's Chemistry Outreach program, an organization of graduate students who perform chemistry demonstrations in local high schools. I later became the leader of this program; it was invaluable experience for me. Thank you again for the support. In my opinion, the fellowship was money well spent!"

John Marchelya wrote: "Thanks to all of the ASEE and ONR staff for everything; your support of my education is much appreciated and has, in effect, forever changed and improved my life. Thank you. I will, as you request, keep in touch with ASEE and ONR and will cite your support in any research documents I produce."

Jennifer McLean wrote: "I would like to take this opportunity to express my sincere appreciation to ONR for selecting me to receive the NDSEG fellowship. It has been a tremendous blessing and honor. I would also like to thank ASEE for the work it has done in the administration of the fellowship. All of the details were handled in a very professional and timely manner. Thank you also for all of the personal assistance you have given me over the past three years."

Kenneth Menningen wrote: "I am indebted to your fine support during my graduate study! Thanks!"

Thomas Orsi wrote: "Thanks for your efforts. Your program is extremely well run."

Robert Peters wrote: "I just wanted to again express my gratitude to you, ONR and ASEE for funding the first three years of my graduate work. I am well aware of the cost associated with higher education, and am grateful for your support on the order of \$143,000; your fellowship was not only a tremendous financial help, but a prestigious honor as well. Thank you once again for your generous fellowship, and I will be sure to include you in the acknowledgements in my dissertation and any other publications, and keep you informed of my progress as well."

Ann Redsten wrote: "I am extremely grateful for all you have done to make the first three years at MIT possible. Without support from the NDSEG program and your efficient administration of the award, I would not have been able to work on my current project. I am working with a professor at MIT who did not initially have the funds to support my research project. Because of this fellowship, I was able to join his group and have tremendous flexibility in choosing a project. As a result, I believe I will be able to produce an excellent thesis. Again, thank you for all you have done to help me through the first, quite difficult, three years of graduate school."

Jeffrey Russakow wrote: "More than ever, a full fellowship upon entering grad school is <u>essential</u> to timely completion of a PhD, and enables the student to voice a reasonable opinion about the choice of a research topic. Indeed, most of my fellow students who arrived at Stanford without independent funding have either (a) dropped out after a struggle due to lack of funds, or (b) made little research progress in the first few years due to the need to scrap for funding. A full three-year fellowship enabled me to join a lab quickly and focus directly on useful research in the course of a PhD."

John Ryan wrote: "I want to let you know how important this opportunity has been. Graduate education is a luxury, and with your help I have been able to pursue an ideal. My education in oceanography will continue here at URI. I extend my sincere gratitude to ONR and to ASEE for their help and support and I wish you all well."

Paul Sanders wrote: "Thanks for making this program easy to use."

Mark Stevenson wrote: "ONR's support was acknowledged thoroughly in my dissertation. Thank you for your help."

Dana Swift wrote: "The short answer is that without the fellowship I could not have attended

grad school. Two papers as well as my master's degree in ocean physics resulted from this. I participated in a large 3-year field experiment in the North Pacific ocean as part of the World Ocean Circulation Experiment (WOCE). I designed the apparatus needed to accurately target the floats to the proper depth. These floats demonstrated truly spectacular results about deep ocean circulation. Many future papers will spring from the excellent data returned by these floats. My contributions in these areas would have been zero without the fellowship. Thank you."

Richard Voyles wrote: "I would like to thank you and ASEE for managing the NDSEG fellowship program during my period as a fellow. Your administration was efficient, responses were timely, and I experienced no problems during my three years in the program. As a member of ASEE, I am also pleased that the society has taken on tasks such as the administration of graduate fellowships. This is a natural way for ASEE to participate in the fostering of the pursuit of advanced degrees by US citizens - an issue that has been much discussed of late. In my particular case, I would not have entered the PhD program at Carnegie Mellon if it had not been for this award. Although I was not able to finish my degree in the three years allotted, I have secured continuation funding from Carnegie Mellon and upon completion I hope to enter the academic ranks. The NDSEG award was the determining factor in my returning to school to get my PhD. As a practicing engineering with a master's earning over \$50K per year, the incentive to return to student wages was not there. The extra income made it tolerable for my family, while the honor of receiving a nationally-competitive fellowship made it worthwhile for me."

David Selkirk Wilson wrote: "Thanks for the efficient, effective work your organization has done in administering this grant. The deposits have always been made smack-dab on time, and the administrative burden has been virtually nil. Any forms you wanted from us were mailed to us with more than enough time to respond. Again, thank you for your professional, dedicated work; it has made my studies possible."

Lonce Wyse wrote: "I want to take this opportunity to express my gratitude for the support from DoD and ASEE during the last three years. Because I was independently funded, I had the freedom to apply the neural network techniques developed here to an area not previously focussed on by this department. The results of the work have been quite rewarding, and I hope to continue this line of research in my career. I will be presenting a paper in Beijing this November. I plan to submit a report on the conference to Dr. Kahaner at ONR/Asia for publication in the 'ONR Scientific Information Bulletin'. This division of ONR is one in which I would be particularly interested and qualified to be involved with in the future. I have received a research assistantship to carry me through the completion of my dissertation work. I look forward to future relationships we may have based on research of our mutual interests."